

IN THE CLAIMS:

Please amend claims 14, 18, and 19 as follows.

Claims 1-13 (Cancelled)

14. (Currently Amended) A method for performing a connection admission control in an asynchronous network node, comprising the steps of:

storing approximation parameters obtained by approximating a traffic parameter function defining an effective bandwidth of a connection,

determining a value representing the effective bandwidth of ~~the~~ a requested new connection by using the stored approximation parameters, ~~and~~

increasing a value representing ~~the~~ a total effective bandwidth by the determined value so as to obtain ~~the~~ an increased value, and

admitting ~~a request~~ the requested new connection, if ~~an increase~~ the increased value representing ~~a~~ the total ~~effective~~ effective bandwidth is not larger than ~~a~~ the predetermined value ~~valued~~,

wherein the value representing the effective bandwidth of the requested new connection is determined by using the following equation,

$$b_{\text{eff}} = a \cdot \text{PCR}^{\alpha} \cdot \text{SCR}^{\beta} \cdot C^{\gamma}$$

wherein a , α , β , and γ represent the stored approximation parameters, PCR represents a peak cell rate of the requested connection, SCR a sustainable or average cell rate of the requested connection and C a link capacity, and

wherein the approximation is a linear approximation of a function which is a logarithm of the traffic parameter function.

15. (Previously Presented) A method according to claim 14, wherein:

different approximation parameters are stored for different maximum cell loss ratios, and wherein the value representing the effective bandwidth of the requested new connection is determined in dependence on a desired maximum cell loss ratio by selecting the stored approximation parameters according to the desired maximum cell loss ratio.

16. (Previously Presented) A method according to claim 14, wherein:

the predetermined value is a link capacity of a multiplex transmission link used for establishing the requested connection.

Claim 17. (Cancelled)

18. (Currently Amended) A method for performing a connection admission control in an asynchronous network node, comprising the steps of:

storing approximation parameters obtained by approximating a traffic parameter function defining an effective bandwidth of a connection,

determining a value representing the effective bandwidth of ~~the~~ a requested new connection by using the stored approximation parameters, ~~and~~

increasing a value representing ~~the~~ a total effective bandwidth by the determined value so as to obtain ~~the~~ an increased value, and

admitting ~~a request~~ the requested new connection, if ~~an increase~~ the increased value representing ~~a~~ the total ~~effective~~ effective bandwidth is not larger than ~~a~~ the predetermined value ~~valued~~,

wherein the approximated traffic parameter function is a function of a ratio between the peak cell rate and the link capacity and of a burst probability of the requested connection.

19. (Currently Amended) A method for performing a connection admission control in an asynchronous network node, comprising the steps of:

storing approximation parameters obtained by approximating a traffic parameter function defining an effective bandwidth of a connection,

determining a value representing the effective bandwidth of ~~the~~ a requested new connection by using the stored approximation parameters, and

increasing a value representing ~~the~~ a total effective bandwidth by the determined value so as to obtain the increased value, ~~comprising~~ and

admitting a request the requested new connection, if ~~an increase~~ the increased value representing a the total ~~affective~~ effective bandwidth is not larger than a the predetermined value ~~valued~~,

wherein said increasing comprises a step of checking the ratio between the peak cell rate and the link capacity, when a connection request is received, wherein the value representing the effective bandwidth of the requested new connection is determined only on the basis of the peak cell rate, if the ratio between the peak cell rate and the link capacity exceeds a predetermined ratio.

20. (Previously Presented) A method according to claim 14, wherein:

different approximation parameters obtained by approximating different regions of the traffic parameter function are stored, and wherein the approximation parameters are selected in accordance with the region in which traffic parameters of the requested connection are located.

21. (Previously Presented) A method according to claim 16, wherein:

the value representing the effective bandwidth of the requested new connection is determined as a fraction of the link capacity, and wherein the predetermined value is 1.

22. (Previously Presented) A method according to claim 14, wherein:

said value representing the total effective bandwidth or both said value representing the total effective bandwidth and said predetermined value are updated when the link capacity changes.

23. (Previously Presented) An apparatus for performing a connection admission control in an asynchronous network node, comprising:

comparing means for comparing an increased value representing a total effective bandwidth with a predetermined value, and

control means for admitting a requested new connection, if the increased value representing the total effective bandwidth is not larger than the predetermined value,

storing means for storing approximation parameters obtained by approximating a traffic parameter function defining an effective bandwidth of a connection,

determining means for determining a value representing an effective bandwidth of the requested new connection by using the stored approximation parameters, and

counting means for increasing a value representing the total effective bandwidth by the determined value so as to obtain the increased value,

wherein the value representing the effective bandwidth of the requested new connection is determined by using the following equation,

$$b_{\text{eff}} = a \cdot \text{PCR}^{\alpha} \cdot \text{SCR}^{\beta} \cdot C^{\gamma}$$

wherein a , α , β , and γ represent the stored approximation parameters, PCR represents a peak cell rate of the requested connection, SCR a sustainable or average cell rate of the requested connection and C a link capacity, and

wherein the approximation is a linear approximation of a function which is a logarithm of the traffic parameter function.

24. (Previously Presented) An apparatus according to claim 23, wherein:

said asynchronous network node is an ATM switch.

25. (Previously Presented) An apparatus according to claim 23, further comprising:

input means for inputting a desired cell loss ratio, wherein different approximation parameters for different cell loss ratios are stored in said storing means, and wherein said determining means is arranged to determine the value representing the effective bandwidth of the requested connection by using approximation parameters corresponding to an input cell loss ratio.

26. (Previously Presented) An apparatus according to claim 23, wherein:

said storing means is arranged to store different approximation parameters for different approximation regions, wherein means is arranged to compare traffic parameters of the requested connection with boundary values defining the different approximation regions, and wherein the determining means (12) is arranged to use approximation parameters in accordance with the result of comparison.